

TEACHERS' RETIREMENT BOARD
INVESTMENT COMMITTEE

SUBJECT: Annual Report on Cash Equitization

ITEM NUMBER: 10

ATTACHMENT(S): 1

ACTION: _____

DATE OF MEETING: March 6, 2002

INFORMATION: X

PRESENTER(S): Steven Tong

EXECUTIVE SUMMARY

A mandate for the Investment Branch in year 2001-2002 is to update the progress of the Cash Equitization Program (Program).

Cash equitization provides a cost effective method of equitizing idle cash waiting to be invested in the equity market by CalSTRS' domestic equity managers. A cash equitization program uses equity index futures to overlay cash exposure. The cash remains invested in short-term fixed income instruments, which when combined with a long futures position, provides a total return close to that of the S&P 500 Index.

The Program provides a flexible way for CalSTRS to keep its exposure to domestic equities close to the adopted strategic asset allocation policy target. As a result, CalSTRS is better able to maintain total domestic equity market exposure and minimize expected tracking error without disturbing the domestic equity manager's investment processes.

This report reviews the Program at CalSTRS. The overall objective of this report is to provide the Investment Committee with information in assessing the progress of the Program.

Since inception in May 1999, the Program has generated strong results, outperforming its benchmark by 44 basis points.

Background

In October 1998, the Investment Committee (Committee) approved the concept of cash equitization for use within the domestic equity asset class. The primary intent of cash equitization is to create a mechanism for keeping the domestic equity exposure as close to the adopted strategic asset allocation policy target as practically possible.

In January 1999, the Committee adopted policies to establish and operate a cash equitization program within the domestic equity class. The Program began operations on May 3, 1999. CalSTRS' Internal Equities and Fixed Income staff administers the Program.

As of December 31, 2001, the Program completed thirty-two months of operations. With approximately \$131.8 million of cash equitized, the internal program produced performance results that exceeded expectations.

Maintaining Equity Exposure

The Committee has adopted a set of standard investment guidelines for its domestic equity accounts. Within these guidelines, the Committee established a maximum of 10% cash position for each individual portfolio. This guideline offers the CalSTRS' manager the flexibility to hold some cash as it is transitioning its portfolio to implement its investment strategy.

However, any continued exposure to cash might reduce the ability of the overall domestic equity portfolio to track the asset class's benchmark (e.g., increase the portfolio's "tracking error"). Tracking error declines significantly when the size of cash holding is reduced to a smaller proportion.

Equity index futures can be used to convert these cash balances to equity market exposure as needed. Currently, CalSTRS is using S&P 500 futures contracts to equitize cash that is waiting to be invested in the domestic equity market by the active and passive managers. Using futures contracts is the lowest-cost method for pension funds to establish and maintain equity exposure.

Consider the following example of a pension fund looking to equitize \$150 million using S&P 500 Index futures, with a 10% equity return and 4% return on short-term cash instruments. With equitizing, the gain can be calculated as follows:

Impact Due to Difference Between Equity and Cash Returns

Total Domestic Equity Assets	\$38,000,000,000
Average Cash Balance During Year	\$250,000,000
Gain $(0.10-0.04) \times 250,000,000$	\$15,000,000

If a cash equitization program has a return close to 10%, the pension fund would retain a significant portion of the \$15.0 million gain versus simply investing the cash balance in money market instruments.

Current Status of the Cash Equitization Program

For the year 2001, the cash balance across the entire domestic equity portfolio has averaged over \$200 million. CalSTRS equitizes approximately 55% of the aggregate domestic equity portfolio's cash balance. In the 2002, Staff may expand the program to achieve its goal of approximately 75% equitization. Equitizing a larger portion of cash earmarked for domestic equity will aid in keeping cash drag at a minimum.

Performance

The objective for the Program is to closely match the performance of the S&P 500 Index. Table 1 shows the Program's performance for the period ending December 31, 2001. The information compares the Program's performance with the returns of the Index. The Program's return for the past twelve months was -10.543% while the index return was -11.883%. Hence, the Program outperformed the index by 1.34% (134 basis points).

Table 1: Cash Equitization Program Performance as December 31, 2001

Period	Program	Index	Tracking Error
Total Return			
1999, Jun-Dec	13.746%	13.679%	0.067%
2000	-8.608%	-9.105%	0.497%
2001	-10.543%	-11.883%	1.340%
Annualized Return			
2 Year	-9.580%	-10.505%	0.925%

Conclusion

The Cash Equitization program has enabled CalSTRS to remain closer to the Committee's adopted asset allocation policy targets. The Program minimized the performance drag attributable to domestic equity manager's cash holdings. Furthermore, Staff has gained valuable knowledge (in terms of both performance and operations) about the use of S&P 500 futures contracts to match or beat the underlying index.

There are potential broader applications for the use of futures in CalSTRS' domestic equity component. Specifically, CalSTRS can use futures to manage an enhanced portfolio within the active domestic equity segment.